

CLAIMS

1. A gearbox having an oil pump driving arrangement therein, the arrangement comprising: oil pump means
5 adapted for pumping oil by rotation of at least a part of said oil pump about an axis; said part being operably connected for rotation to reverse idler gear means whereby rotation of said idler gear means causes said oil pump means to pump oil.
- 10 2. An arrangement according to claim 1 wherein said axis is the axis of rotation of said reverse idler gear means.
3. An arrangement according to either claim 1 or claim 2 wherein part of said oil pump means is
15 incorporated into said reverse idler gear means.
4. An arrangement according to any one preceding claim wherein operative, relatively moving parts of said oil pump means lie axially within radial planes defined by axial end faces of said reverse idler
20 gear means.
5. An arrangement according to any one preceding claim wherein a shaft on which said reverse idler gear means is mounted is stationary and said reverse idler gear is rotatable about said shaft.
- 25 6. An arrangement according to claim 5 wherein a first operable part of said oil pump means is incorporated into said shaft means and is stationary therewith.
7. An arrangement according to claim 6 wherein a second operable part of said oil pump means is incorporated
30 into said reverse idler gear means and is rotatable about said first operable part.
8. An arrangement according to any one preceding claim wherein said oil pump means is a gerotor type oil pump comprising a rotor element and an annulus
35 member.

9. An arrangement according to claim 8 wherein the annulus member rotates eccentrically with respect to the axis of rotation of said reverse idler gear means.
- 5 10. An arrangement according to either claim 8 or claim 9 wherein said annulus member is fitted to said reverse idler gear means.
11. An arrangement according to either claim 8 or claim 9 wherein said annulus is formed integrally with
10 said reverse idler gear means.
12. An arrangement according to any one preceding claim wherein an oil path is effected through the idler gear support shaft.
13. An arrangement according to any one of preceding
15 claims 1 to 7 wherein said oil pump means is selected from the group comprising gear pumps and crescent type pumps.
14. A method of incorporating an oil pump into a gearbox, the method comprising the steps of:
20 providing oil pump means which comprise at least two relatively moving parts which are adapted to co-operate to pump oil; operably connecting reverse idler gear means to at least one of said at least two moving parts so as to cause relative movement
25 therebetween and thereby to effect pumping of oil.
15. A power plant comprising an engine and a gearbox, the gearbox embodying the arrangement of any one of preceding claims 1 to 13.
16. A motor vehicle embodying a gearbox or power plant
30 as defined in any one preceding claim from 1 to 13 and 15.
17. A gearbox having an oil pump driving arrangement therein substantially as hereinbefore described with

reference to the accompanying description and Figures 1 to 8 of the drawings.

18. A vehicle having a gearbox having an oil pump driving arrangement therein substantially as
5 hereinbefore described with reference to the accompanying description and Figures 1 to 8 of the drawings.